

## **Decontamination Protocol To Control Spread of Aquatic Invasive Species in Utah**

*For research institutions or others seeking a Certificate of Registration to collect, import or transport aquatic wildlife in Utah*

The following actions are necessary to control the spread of Aquatic Invasive Species (AIS) in Utah. There are many AIS in Utah, spanning fungus to algae to plants to animals ([www.wildlife.utah.gov/mussels](http://www.wildlife.utah.gov/mussels)). When recreation or work will occur within or at fish hatchery areas, or within riparian, wetland, spring, lake or river areas all equipment must be decontaminated.

Equipment to be decontaminated includes, but is not limited to footwear & gloves; angling or sampling equipment, including nets, live cages, holding boxes, coolers, and scales; boats, trailers and vehicles; or any other equipment having contact with the water, “green strip,” or aquatic animals. When possible, stage recreation or work operations sufficiently away from the water body or “green strip” to minimize unnecessary contact by equipment with potentially AIS affected areas, avoiding inadvertent contamination of equipment. New Zealand mudsnail have been found in the “green strip” more than 40 feet from the water’s edge.

1. Decontamination should first occur before arrival at a recreation or project site, so AIS are not transferred from the last visited area. Preferably, decontamination will have occurred onsite at the last area. **DO NOT ARRIVE OR MOVE ABOUT IN UTAH WITH DIRTY OR WET EQUIPMENT!**
2. Decontamination should again occur before leaving a recreation or project site, so AIS are not transferred to the next site.

**Note:** Decontaminations must be done on a site-by-site basis not drainage-by-drainage, since many AIS are found within one stream segment or body of water, but may not yet occur either upstream or downstream or even in another lake arm at a recreation or project site.

Decontaminations are for the sole purpose of killing AIS to avoid inadvertent transfer from one locale to another. Desiccation, either by drying or high temperature wash, is very effective at killing AIS. And, in limited situations some chemicals are helpful. Accepted methods for Utah follow:

Self-Decontamination (all three steps—clean, drain & dry--are required for decontamination of boats in Utah—Rule R657-60)

1. **CLEAN** (remove) off all attached mud, debris, plants or animals from the aforementioned equipment. Scrub with a stiff-bristled brush, then visually inspect, since AIS (seeds, spores, plant shards or the animal itself) frequently collect in seams, crevices or cracks on equipment, including tires, or between the laces and tongue of wading boots (felt-soled wading boots are disallowed in Utah). Follow the cleaning & inspection with a tap water rinse, where possible, or rinse with clear raw water. Additionally, some chemical treatments can aid in the cleaning step for footwear and small angling or

sampling equipment. No chemical process is yet approved for decontamination of boats in Utah.

(A) Footwear and small angling or sampling equipment (not boats or vehicles that have been in contact with the water) can be sprayed with Clorox Formula 409 to kill New Zealand mudsnail and whirling disease spores. Wetted contact time should be at least 30 minutes, then allow the gear to dry in the sun prior to reuse.

**Note:** The correct Clorox Formula 409 product will list dimethyl benzyl ammonium chloride as 0.3%.

(B) Copper sulfate solutions having a concentration of 252 mg/l of copper are known to kill New Zealand mudsnails. Wetted contact time using copper sulfate should be more than 5 minutes, then allow the gear to dry in the sun prior to reuse.

(C) If decontaminating large pieces of equipment (not boats or vehicles that have been in contact with the water or “green zone”), use Hyamine or Sparquat, which can be purchased in bulk. Quat 128 mixed as 6.4oz/gallon of water is reported to kill chytrid fungus, whirling disease spores and New Zealand mudsnail.

2. DRAIN all raw water from the aforementioned equipment to prepare it for drying. Make sure any raw water circulation systems or containers (coolers and sample containers) are drained, including cooling systems, livewells, ballasts, bilge, and motors (let the lower unit down, so water drains, then run the engine out of the water for 2-3 minutes to raise the temperature to 140<sup>0</sup> F, etc.

3. DRY the aforementioned equipment to kill AIS. Temperature and humidity affect drying time, so in Utah dry for 7 days in summer (June, July & August); 18 days in Spring (March, April & May) and Fall (September, October & November); or 30 days in Winter (December, January & February). Due to extended freezing temperatures in Winter, properly winterized equipment can be exposed for 72 consecutive hours of sub-freezing temperature to kill AIS.

Professional Decontamination (an alternative decontamination of boats in Utah—Rule R657-60), which will also kill all AIS.

Use a professional to apply scalding water (140<sup>0</sup> F) to wash boats or any other equipment exposed to raw water, and to flush raw water circulation systems.